

## APPENDIX OF AMENDED SPECIFICATION

Page 9, lines 23-26:

The DNA motif (A/C)GGA(A/T)(G/A) (N-box) (SEQ. ID. NOS. 1-10) is the core binding sequence of the transcription factor known as GA Binding Protein (GABP), Nuclear Respiratory Factor 2 (NRF-2)<sup>10</sup>, E4 Transcription factor 1 (E4TF1)<sup>11</sup> and Enhancer Factor 1A (EF-1A)<sup>12</sup>. In this report we refer to the transcription factor as GABP and to the motif as the N-box.

Page 25, line 8 through page 26, line 2:

Mouse 3T3 cells were treated for 2 h with diethyl maleate (DEM), a glutathione (GSH)-depleting agent, in the presence or absence of N-acetylcysteine (NAC), an antioxidant and a precursor of GSH synthesis. Following treatment, the cells were harvested, and nuclear extracts were prepared in the absence of a reducing agent. GABP DNA binding activity was measured by EMSA analysis using oligonucleotide probes containing a single N-box (SEQ. ID. NO. 3[AGGAAG]) or two tandem N-boxes (SEQ. ID. NO. 11[AGGAAGAGGAAG]). Treatment of 3T3 cells with DEM resulted in a dramatic decrease in the formation of the GABP heterodimer (GABP $\alpha$ GABP $\beta$ , (Martin 1996<sup>89</sup>, Fig. 2A, lane 2) and heterotetramer (GABP $\alpha_2$ GABP $\beta_2$ ) (Ibid, Fig. 2A, lane 6) complexes on the single and double N-box. [X]Inhibition of GABP DNA binding activity by DEM treatment was prevented by simultaneous addition of NAC (Ibid, Fig. 2A, lane 4 and 8). The reduction of GABP DNA binding activity was not due to loss of GABP protein since the amount of GABP $\alpha$  and GABP $\beta$ 1 was unaffected by DEM or NAC treatment. Dithiothreitol (DTT) is an antioxidant. DTT treatment of nuclear extracts prepared from DEM-treated 3T3 cells restored GABP binding activity. Treatment of 3T3 nuclear extracts with 5 mM GSSG nearly abolished GABP DNA binding. Based on these observations Martin *et al.*, concluded that GABP DNA binding activity is inhibited by oxidative stress, i.e. GSH depletion. The study also measured the effect of DEM treatment on expression of transiently transfected luciferase reporter constructs containing a TATA box with either upstream double N-box or C/EBP binding site (Ibid, Fig. 4). DEM treatment had no effect on luciferase expression from C/EBP-TA-Luc after 6 or 8 h treatment (Ibid, Fig. 4). However, DEM treatment of cells

transfected with double N-box-TATA-Luc, resulted in a 28% decrease in luciferase expression after 6 h and a 62% decrease after 8 h (Ibid, Fig. 4). Based on these results, Martin *et al.*, concluded that glutathione depletion inhibits GABP DNA binding activity resulting in reduced expression of GABP-regulated genes.

Page 42, lines 16-23:

Mutation of the [AGGAAG] proximal N-box (SEQ. ID. NO. 3) to SEQ. ID. NO. 12[AGCTAAG] eliminated the DNA-protein complex formation (Pan 1998, Fig. 6C). BAEC transfected with a reporter gene directed by the murine P-selectin promoter with the mutated N-box showed a 2-10-fold increased expression compared to the wild-type promoter (Ibid, Fig. 6F). The increased transcription indicates that binding of the Ets related factor to the proximal N-box represses the P-selectin gene. Deletion of the distal N-box had no effect on the reporter gene expression. The increase transcription of the mutated gene indicates that GABP is a repressor of P-selectin.

Page 44, table between lines 10 and 11:

Gene	Sequence	Dist.*
Murine Laminin B2 (SEQ. ID. NO. 13)	<u>CTTCCTCCTGGGCGCGCTCTCGAGTGC</u> <u>GCGCTCGGAAG</u>	26 bp 3.0 HT
Human Type IV collagenase (SEQ. ID. NO. 14)	<u>TTTCCGCTGCATCCAGACTTCCT</u>	11 bp 1.5 HT
Human CD4 (SEQ. ID. NO. 15)	<u>AGGAGCCTTGCCATCGGGCTTCCT</u>	12 bp 1.5 HT
Murine CD4 (SEQ. ID. NO. 16)	<u>AGGAGCCTCACGACCAGGCTTCCT</u>	12 bp 1.5 HT
Murine COX Vb (SEQ. ID. NO. 17)	<u>CGGAAGTCCCGCCCATCTTGCTCAGCCTGTTCCCGGAAG</u>	27 bp 3.0
Murine COX IV (SEQ. ID. NO. 18)	<u>CTTCCGGTTGCGGGCCCCGTTCTTCCG</u>	15 bp 2.0 HT
Ad2-ML (SEQ. ID. NO. 19)	<u>CGTCCTCACTCTCTTCCG</u>	6 bp 1.0 HT
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